

Claims:

1. (Original) A method comprising:

determining a power save status of a first station wherein said first station

communicates via a shared-communications channel in accordance

with a first modulation scheme; and

enabling transmission protection at a second station via said shared-

communications channel wherein said enabling is dependent on

said power save status.

2. (Original) The method of claim 1 wherein said determining comprises:

transmitting one of a Request-to-Send frame, a Data frame, and a Null

frame to said first station via said shared-communications channel

in accordance with said first modulation scheme; and

receiving one of an Acknowledgement frame and a Clear-to-Send frame

from said first station.

3. (Original) The method of claim 1 wherein said enabling comprises

broadcasting a management frame via said shared-communications channel.

4. (Original) The method of claim 3 wherein said management frame is one of:
 - (i) a Beacon frame indicating that protection status is active; and
 - (ii) a Probe-Response frame indicating that protection status is active.

5. (Original) The method of claim 3 wherein said first modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation.

6. (Previously Presented) A method comprising:
receiving a first frame from a station via a shared-communications channel
wherein said station communicates in accordance with a first modulation scheme;
determining whether the station is in power save mode; and
broadcasting an IEEE 802.11 Probe-Response frame via said shared-communications channel in response to said receiving;
wherein said IEEE 802.11 Probe-Response frame indicates that protection status is active.

7. (Original) The method of claim 6 wherein said first modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation.

8. (Previously Presented) A method comprising alternately enabling and disabling transmission protection at a first station that communicates via a shared-communications channel in accordance with a first modulation scheme; wherein said first modulation scheme is undetectable to a second station that communicates via said shared-communications channel in accordance with a second modulation scheme wherein the enabling or disabling of the transmission protection is associated with a determination of whether the first station is in a power save mode; and wherein said first modulation scheme and said second modulation scheme are different from each other.
9. (Original) The method of claim 8 wherein said enabling and said disabling are periodic with respect to one of (i) frames transmitted and (ii) time.
10. (Original) The method of claim 8 wherein said enabling and said disabling are sporadic with respect to one of (i) frames transmitted and (ii) time.
11. (Original) The method of claim 8 further comprising extending transmission protection for a first interval when receiving a first frame from said second station while transmission protection is enabled, wherein said first interval is measured in one of (i) time and (ii) frames.

12. (Original) The method of claim 8 further comprising activating protection for a first interval when receiving a first frame from said second station while transmission protection is disabled, wherein said first interval is measured in one of (i) time and (ii) frames.

13. (Original) The method of claim 8 wherein said enabling comprises transmitting a first management frame via said shared-communications channel.

14. (Original) The method of claim 13 wherein said first management frame is one of:

- (i) a Beacon frame indicating that protection status is active; and
- (ii) a Probe-Response frame indicating that protection status is active.

15. (Original) The method of claim 8:
wherein said first modulation scheme is based on one of Barker
modulation and Complementary Code Keying modulation; and
wherein said second modulation scheme is based on Orthogonal
Frequency Division Multiplexing modulation.

16. (Previously Presented) A method comprising:
- transmitting a first frame comprising a duration field value to a first station via a shared-communications channel in accordance with a first modulation scheme;
- receiving a second frame from a second station via said shared-communications channel in accordance with a second modulation scheme during a time interval defined by said duration field value;
- determining whether the second station is in power save mode; and
- receiving a third frame via said shared-communications channel in accordance with said first modulation scheme after said time interval;
- wherein said first modulation scheme is undetectable to said second station; and
- wherein said first modulation scheme and said second modulation scheme are different from each other.
17. (Original) The method of claim 16:
- wherein said first modulation scheme is based on Orthogonal Frequency Division Multiplexing modulation; and
- wherein said second modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation.

18. (Original) The method of claim 16 wherein said transmitting is one of (i) periodic and (ii) sporadic.

19. (Original) The method of claim 16 wherein said frame is a Clear-to-Send frame and said first station is the sender of said frame.

20. (Original) An apparatus comprising:
a processor for determining a power save status of a first station wherein
said first station communicates via a shared-communications
channel in accordance with a first modulation scheme; and
a transmitter for enabling transmission protection at a second station via
said shared-communications channel wherein said enabling is
dependent on said power save status.

21. (Original) The apparatus of claim 20 wherein said enabling comprises
broadcasting a management frame via said shared-communications channel.

22. (Original) The apparatus of claim 21 wherein said management frame
is one of:

- (i) a Beacon frame indicating that protection status is active; and
- (ii) a Probe-Response frame indicating that protection status is active.

23. (Original) The apparatus of claim 21 wherein said first modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation.

24. (Previously Presented) An apparatus comprising:
a receiver for receiving a first frame from a station via a shared-communications channel wherein said station communicates in accordance with a first modulation scheme and for determining whether the station is in power save mode; and
a transmitter for broadcasting an IEEE 802.11 Probe-Response frame via said shared-communications channel in response to said receiving; wherein said IEEE 802.11 Probe-Response frame indicates that protection status is active.

25. (Original) The apparatus of claim 24 wherein said first modulation scheme is based on one of Barker modulation and Complementary Code Keying modulation.

26. (Previously Presented) An apparatus comprising:
- a receiver for receiving in accordance with a first modulation scheme and
- a second modulation scheme via a shared-communications channel; and
- a transmitter for alternately enabling and disabling transmission protection at a first station responsive to determining that the first station is in power save mode, wherein the first station communicates via a shared-communications channel in accordance with a first modulation scheme;
- wherein said first modulation scheme is undetectable to a second station that communicates via said shared-communications channel in accordance with a second modulation scheme; and
- wherein said first modulation scheme and said second modulation scheme are different from each other.
27. (Original) The apparatus of claim 26 wherein said enabling and said disabling are periodic with respect to one of (i) frames transmitted and (ii) time.
28. (Original) The apparatus of claim 26 wherein said enabling and said disabling are sporadic with respect to one of (i) frames transmitted and (ii) time.

29. (Original) The apparatus of claim 26 further comprising extending transmission protection for a first interval when receiving a first frame from said second station while transmission protection is enabled, wherein said first interval is measured in one of (i) time and (ii) frames.

30. (Original) The apparatus of claim 26 further comprising activating protection for a first interval when receiving a first frame from said second station while transmission protection is disabled, wherein said first interval is measured in one of (i) time and (ii) frames.

31. (Original) The apparatus of claim 26 wherein said enabling comprises transmitting a first management frame via said shared-communications channel.

32. (Original) The apparatus of claim 31 wherein said first management frame is one of:

- (i) a Beacon frame indicating that protection status is active; and
- (ii) a Probe-Response frame indicating that protection status is active.

33. (Original) The apparatus of claim 26:

wherein said first modulation scheme is based on one of Barker

modulation and Complementary Code Keying modulation; and

wherein said second modulation scheme is based on Orthogonal

Frequency Division Multiplexing modulation.

34. (Previously Presented) An apparatus comprising:
- a transmitter for transmitting a first frame comprising a duration field value to a first station via a shared-communications channel in accordance with a first modulation scheme, and for determining whether the second station is in power save mode; and
 - a receiver for:
 - receiving a second frame from a second station via said shared-communications channel in accordance with a second modulation scheme during a time interval defined by said duration field value; and
 - receiving a third frame via said shared-communications channel in accordance with said first modulation scheme after said time interval;
- wherein said first modulation scheme is undetectable to said second station; and
- wherein said first modulation scheme and said second modulation scheme are different from each other.

35. (Original) The apparatus of claim 34:
wherein said first modulation scheme is based on Orthogonal Frequency
Division Multiplexing modulation; and
wherein said second modulation scheme is based on one of Barker
modulation and Complementary Code Keying modulation.
36. (Original) The apparatus of claim 34 wherein said transmitting is one of
(i) periodic and (ii) sporadic.
37. (Original) The apparatus of claim 34 wherein said frame is a Clear-to-Send frame and said first station is the sender of said frame.